

US DEPARTMENT OF AGRICULTURE  
FOREST SERVICE



*Northeastern Area*  
*State & Private Forestry*  
**DIVISION OF FOREST PEST CONTROL**

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RESULTS OF CONE INSECT  
DAMAGE SURVEYS IN WHITE  
SPRUCE SEED PRODUCTION AREAS - 1969

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INTRODUCTION

Two white spruce, Picea glauca (Moench) Voss, SPA's were sampled to determine losses from insect damage. Surveys were conducted in the Gilfillan SPA, Chippewa National Forest, and Oconto SPA, Nicolet National Forest. Very few cones were observed in the Gates Lake SPA, Chequamegon National Forest, and no samples were taken.

METHODS

The sampling procedure consists of cutting one cone-bearing whorl of branches from each tree to be sampled. Fifteen trees were sampled in the Oconto SPA and five trees in the Gilfillan SPA. The cones are picked from the branches, bagged, tagged, and shipped to the St. Paul Field Office for examination and determination of the cause of damage.

RESULTS

The damage to the cones and seeds was caused by the following three groups of species: Dioryctria spp., Laspeyresia spp., and Pegohylemia spp. (Table 1). Dioryctria larvae destroy the entire cone, while the last 2 cause partial damage of the cones.

In the Gilfillan SPA about one-fifth of the cones are destroyed and an additional one-fifth are partially damaged. About one-twentieth of the cones in the Oconto SPA are destroyed and an additional one-third are partially damaged.





Table I. Cone Insect Damage in Two White Spruce Seed Production Areas - 1969

Seed Production Area	Number Trees Sampled	Total No. Cones Sampled	Cones Killed By <u>Dioryctria spp.</u> %	Cones Damaged By			Total %
				<u>Laspeyresia spp.</u> %	<u>Pegohylemia spp.</u> %		
CHIPPEWA N.F. Gilfillan	5	42	19	2		17	38
NICOLET N.F. Oconto	15	421	5	5		30	40